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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,812	07/28/2003	Stephen A. Tarin	8676-041	9035

20583 7590 02/22/2006

JONES DAY
222 EAST 41ST ST
NEW YORK, NY 10017

EXAMINER

ALAM, SHAHID AL

ART UNIT	PAPER NUMBER
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2162

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/629,812

Applicant(s)

TARIN, STEPHEN A.

Examiner

Shahid Al Alam

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119


- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 07282003.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-914)
- 6) ☐ Other: _____.


SHAHID ALAM
PRIMARY EXAMINER

DETAILED ACTION

1. This action is in response to the application filed on July 28, 2003.
2. Claims 25 – 30 are pending.

Information Disclosure Statement

3. The reference cited in the information disclosure statement, IDS-PTO-Form 1449, Paper Nos. 07282003, have been considered.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 25 – 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 5,542,073 issued to Klaus Schiefer et al. ("Schiefer").

With respect to claim 25, Schiefer teaches a system for storing and retrieving tuples (column 1, lines 18-22) comprising: a collection of a number of instances corresponding to a value of a first attribute; a cardinality element corresponding to the number of instances; wherein at least one instance indicates at least one other instance corresponding to a value of a second attribute and the second attribute is different from the first attribute (see abstract, column 2, lines 41 – 56).

Schiefer teaches that effective cardinality should be determine when the value of particular attribute changes, therefore, it would have been obvious to a person of ordinary skill in the computer art at the time the invention was to update cardinality in

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order to efficiently evaluate the cost estimate to obtain the lowest execution cost (column 3, lines 21 – 32).

With respect to claim 26, Schiefer teaches a system for storing and retrieving tuples (column 1, lines 18-22) comprising: a collection of a number of instances corresponding to a value of a first attribute; a cardinality element corresponding to the number of instances; wherein the value can be derived from the cardinality element and wherein at least one instance indicates at least one other instance corresponding to a value of a second attribute and the second attribute is different from the first attribute (see abstract, column 2, lines 41 – 56 and column 8, lines 11 – 19).

As to claim 27, for at least two tuples having identical first attribute values and identical second attribute values, . . . a cardinality element, . . . attribute values (see abstract, column 1, lines 19 – 37).

As to claim 28, the instance element comprises the cardinality element (see abstract).

The subject matter of claims 29 – 30 are rejected in the analysis above in claims 25 – 28 and these claims are rejected on that basis.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent Number 5,379,422 issued to Antoshenkov.

U.S. Patent Number 5,855,019 issued to Bhargava et al.

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shahid Al Alam whose telephone number is (571) 272-4030. The examiner can normally be reached on Monday-Thursday 8:00 A.M.- 4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shahid Al Alam
Primary Examiner
Art Unit 2162

February 15, 2006